

2 - Bedrock - CC 1-20 - E 9 - Sediment - CC 21 - 30 - SE/E 3 - Bedrock/Boulder - CC 1-23, 32, 33 - SE Current Dominated 4 - Bedrock/Gravel - CC 1-23, 33 - SP 10 - Bedrock or Sediment - CC 34 - VP/P/SP 5 - Bedrock/Gravel - CC 1-23,33 - P/VP Tidal Lagoon 11 - Bedrock or Sediment - CC 35 - VP/P/SP CC Type Rock Shore Types - characterized by a lack of clastic sediments such as gravel or sand. Sediment Shore Types - have substrates that have little or no bedcrock cropping out 1 Rock Ramp, Wide 2 Rock Platform Wide 3 Rock Cliff Narrow 4 Rock Ramp, Narrow 5 Rock Platform Narrow Rock and Sediment Shore Types - rock and pockets of clastic sediments 6 Ramp with Gravel Reach, Wide 21 Gravel Flat, Wide 22 Gravel Beach 23 Gravel Flat or Fan 24 Sand and Gravel Flat or Fan, Wide 25 Sand and Gravel Beach 26 Sand and Gravel Flat or Fan, Narrow 26 Sand and Gravel Flat or Fan, Narrow 27 Sand Beach, Wide 28 Sand Flat 6 Ramp with Gravel Beach, Wide 7 Platform with Gravel Beach, Wide 7 Platform with Gravel Beach, Wide 8 Cliff with Gravel Beach, Narrow 10 Platform with Gravel Beach, Narrow 11 Ramp with Sand and Gravel Beach, Wide 12 Platform with Sand and Gravel Beach, Wide 13 Cliff with Sand and Gravel Beach, Wide 14 Ramp with Sand and Gravel Beach, Narrow 15 Platform with Sand and Gravel Beach, Narrow 16 Ramp with Sand Beach, Wide 17 Platform with Sand Beach, Wide 18 Cliff with Sand Beach 19 Ramp with Sand Beach, Narrow 20 Platform with Sand Beach, Narrow 29 Mud Flat 30 Sand Beach, Narrow 31 Estuaries Man-Made Materials 32 Man-made, permeable 33 Man-made, impermeable Current Dominated 34 Channel

Each Habitat Type has a definition that includes the typical substrate, wave exposure and biobands. For example, for the Semi-exposed, Immobile substrate Habitat Type, part of the definition of that class is a certain combination of the most likely biobands and indictor species present at a bedrock shoreline with no mobile sediment present.

How is Habitat Type determined? Each Habitat Type has typical biological features (including both an indicator species list and typical associated biobands).

To determine the Habitat Type, the biomapper looks at the along-shore Units as designated and described by the physical mapper, and 1. records the observations of the biobands in the unit and looks for indicator species,

2. □ assigns a bio-(wave) exposure category,
3. □ reviews the physical mapped information, and
4. □ assigns the Habitat Type that best describes the unit. The Habitat Type is based on the whole unit and is similar to the physical mappers use of the 'Coastal Class' category, in that the detailed across-shore data are summarized into one attribute. The simplified category describes the features of the whole unit.

VP - Very Protected - Very low wave exposure, fethces < 1km, sheltered anchorages at heads of bays and inletes

Habitat Type is a summary of the biophysical classification of the whole shore unit, based on: • □ the biobands observed, • the wave exposure as indicated by the bands, and • the substrate types in the unit.

Legend Definitions
CC - Coastal Classification number

E - Exposed - Very high wave exposure, open ocean swellsm usually fetches >500km VE - Very Exposed - Extreme high wave exposure SE - Semi Exposed - High wave exposure, open shorelines, areas between fully exposed and more sheltered, usually fetches 50 to 500km P - Protected - Low wave expsoure, sheltered inlets, usually fetches less than 10km SP - Semi Protected - Moderate wave expsoure, partly sheltered, usually fetches 10-50km

SUBSTRATE STABILITY	IMMOBILE SUBSTRATES				MOBILE OR PARTIALLY MOBILE SUBSTRATES				CURRENT- DOMI- NATED	TIDAL IAGOON
MAJOR SUBSTRATE	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/GRAVEL	SAND & GRAVEL	SAND & GRAVEL	SAND/MUD	SEDIMENT	BEDROCK OR SEDIMENT	BEDROCK OR SEDIMENT
COASTAL CLASSES	1-20	1-23, 32, 33	1-23, 33	1-23, 33	24 – 30, 32 no SAL band	24 – 30, 32 no SAL band	24 - 30, 31 has SAL band	24-30	34	35
EXPOSURE (EXP BIO)	Е	SE	SP	VP, P	SP	VP, P	VP, P, SP	SE, E	VP, P, SP	VP, P, SP
COMMUNITY CODE (HAB OBS)	2	3	4	5	6	7	8	9	10	11
upper	Verrucaria Balanus glandula	Verrucaria Enteromorpha Balanus glandula Pucus distichus	Verrucaria Enteromorpha Balanus glandula Fucus distichus	Verrucaria Enteromorpha Balanus glandula Fucus distichus	Verrucaria Enteromorpha Balanus glandula Fucus distichus	Verrucaria Enteromorpha Balanus glandula Pucus distichus	grasses & rushes Salicornia virginica Balanus glandula Fucus distichus	macrobiota due to be sediment wobility be a ii	tidal current dominated; may be a Protected wave exposure but shows an assemblage of indicator species from higher wave exposures. Assemblage observed is 'anomalous' for the wave energy of the site.	Balanus glandula Fucus distichus ponded water in lagoon creates narrow intertidal and a reduced biota in brackish water, may have associated current dominated at outflow
middle	Pollicipes polymerus Mytilus californianus Semibalanus carriosus	Mytilus californianus Semibalanus carriosus	Mytilus trossulus* Semibalanus carriosus Ulva/ Ulvaria spp.	Mytilus trossulus * Ulva/ Ulvaria spp.	Semibalanus carriosus Ulva/ Ulvaria spp.	Ulva/ Ulvaria spp.	Mytilus trossulus** Ulva/ Ulvaria			
mid/low	Alaria 'nana' morph	Hedophyllum sessile Phyllospadix scouleri								
lower	Lessoniopsis littoralis Lithothamnion	Alaria 'marginata' morph Lithothamnion	Laminaria groenlandica Laminaria saccharina Alaria 'marginata' morph Lithothamnion	Laminaria saccharina	Laminaria groenlandica Laminaria saccharina Alaria 'marginata' morph Lithothamnion	Laminaria saccharina				
subtidal	Nereocystis luetkeana	Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus	Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus Zostera marina	Macrocystis integrifolia Agarum spp. Zostera marina	Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus Zostera marina	Macrocystis integrifolia Agarum spp. Zostera marina	Zostera marina			

